

subjects. They do not in any way differ from ordinary drawings, specimens of which are reproduced here. They have the same defects, and are also realistic. Somewhat fanciful is a drawing of the spider-crab, representing the marine deity.¹ The drawings of circles around the heads of the Supreme Deity, his wife and son,² and the beams radiating from the heads of the first two, seem to be an imitation of the circles and rays representing the halos around the heads in orthodox icons, which the artist had no doubt seen in Russian houses on more than one occasion on his trips to Gishiginsk.

WRITING. — Although I found no pictographic letters on bark among the Koryak, — such as are found among the Yukaghir, and which serve with them as a means of communication between people at a distance, — yet the memoranda and commercial notes used by the Koryak traders are curious specimens of a primitive writing of a somewhat pictographic nature. The Koryak traders in Kamenskoye and in northern Kamchatka purchase from Russian merchants pencils and paper or memorandum-books, in which they score their purchases and sales, denoting the articles by means of realistic or conventionalized reproductions.

Figs. 248-250 represent three specimens of such records of Qač'ilqut, a Koryak trader of Kamenskoye. Fig. 248 represents a record in his memorandum-book of goods received at a fair from the clerk of a Gishiginsk merchant with whom he keeps an open account. Fig. 249 is a copy of a letter containing a list of furs forwarded by Qač'ilqut to the merchant. Fig. 250 represents a list of goods which he furnished me for our ethnographical collection.

The system of records used by Qač'ilqut consists of a representation of the articles, in real or conventionalized form, on one side of a long line, and of special numeral signs on the other. Qač'ilqut, however, does not adhere to one particular side in representing the articles or their number. The bill which he presented to me (Fig. 250) differs somewhat from his ordinary notes. His system of sign-figures puzzled me somewhat at first. To my question as to who invented them, Qač'ilqut replied, "I know myself." Later on I found in the archives of the natives on the Kolyma River receipts of Russian officials of the eighteenth and the beginning of the nineteenth centuries. The receipts testified as to the payment of tribute in furs by the native chiefs, and the number of fur skins or rubles received as tax was indicated by Russian letters and also by means of the system used by Qač'ilqut, evidently for the benefit of the illiterate natives. It consisted of a simplification of the Roman system of numeration, being reduced to three signs only,³ — I (one), X (ten), and X enclosed in a circle (one hundred), as in Fig. 249, *q*. Such receipts were found also in the archives by Mr. Bogoras. In one, dated 1823, given

¹ See Part I, Fig. 1, p. 20.

² Ibid., Figs. 40, 41, p. 93.

³ It is of interest to remember that the ancient Egyptian numeration consisted of only four signs; namely, for 1, 10, 100, and 1000. In composing large numbers, they were used in the same manner as Qač'ilqut uses his three signs, — by means of repetition (see Tyler, *Anthropology*, London, 1904, p. 313).

532

212
438

212
438

to the elder of the Omotski Yukaghir Clan by the chief of the Kolyma district, the following signs were used: X (one ruble), □ (ten rubles), ⊙ (a hundred rubles), and I (kopeks). The use of the three signs by Qač'i'lqut can be explained as an imitation of the old Russian signs by Qač'i'lqut's ancestors. At present Russian officials do not use these signs in their receipts. Following is a more detailed explanation of the use of the three signs, based on the statements of Qač'i'lqut himself.

Record from Memorandum-Book (Fig. 248).

1. One iron pot. The pot is represented by a circle.
2. Two tea-kettles. The tea-kettle is represented by a circle with a beak, the latter representing the spout. A little arc on the top stands for the handle.
3. Twenty-five pounds and a half of leaf-tobacco. The tobacco is represented by a bunch of leaves, and the fraction one-half is indicated by a dot. This arithmetical sign I have not found in the receipts of the tax-gatherers of the eighteenth century. It is Qač'i'lqut's own invention.
4. One large knife. The knife is represented by a long vertical line.
5. Two small belt-knives. The knife is represented by a vertical line smaller than the preceding one. In this memorandum, Qač'i'lqut has departed somewhat from his system by denoting the number 2 twice, — once graphically, and again by numerical signs.
6. Twenty pounds of wheat-flour. The flour is indicated by a black ring, which stands for a full bag of flour.
7. Six papers of needles. The paper is indicated by a rectangle, which stands for a paper filled with needles.
8. Fifty large needles. The place for indicating the object is left blank, which is equivalent to "ditto;" but under the numeral signs there is a long horizontal line, which signifies that the needles are of a larger size.
9. Calico prints for one shirt. The calico is represented by a horizontal line, which stands for a strip of cloth cut off from a bolt of goods.
10. One woollen shawl. The shawl is represented by a rectangle with fringe on the sides.
11. One tablecloth. The tablecloth is indicated in the same way as the shawl.
12. One scarf. The scarf is represented by a horizontal line with a fringe at the end.
13. Three arshins¹ of red cloth for a shirt.² The cloth, like the calico (No. 9), is represented by a horizontal but longer line. The color of the cloth is left to be implied, since the outside shirt is made by rich Koryak only of red cloth.
14. Two plates. The plate is indicated by a ring, but of a smaller size than that for the pot (see No. 1).

0	1	1
⊙	11	2
X	X	3
I	I	4
⊙	11	5
X	X	6
⊙	11111	7
X	X	8
I	I	9
⊙	I	10
⊙	I	11
X	I	12
I	111	13
⊙	11	14
⊙	111	15
⊙	111	16
⊙	11	17
⊙	11111	18
⊙	111	19
⊙	11	20
⊙	11	21
X	X	22
⊙	11111	23
⊙	11111	24
P	I	25
⊙	11	26
⊙	11	27
⊙	11	28

Fig. 248. Koryak Account.

[804]

¹ An arshin is equivalent to two feet and a third.

² See p. 393.

JOCHELSON, THE KORYAK.

729

212
438

15. Three woollen shawls (see N°. 10).
16. Four strings of beads. The string of beads is represented by a thread strung with beads, with the ends tied together; but the beads in the drawing have a rather strange form.
17. Two brass chains for women's hair-dressing. It is interesting that the links are represented by rings which do not pass through one another, but are joined by a line.
18. Nine little bells. The bell is represented by a ring with a little tag above, which stands for the handle of the bell.
19. Three iron dog-chains. The chain is represented as in No. 17, only of a larger size.
20. One belt.
21. Three large belts. The belt is represented by a horizontal line like the piece of calico (No. 9) or of cloth (No. 13).
22. Twenty bricks of tea. The brick of tea is indicated by a black rectangle.
23. Six cups and saucers. Of two concentric circles, the one inside represents the cup, and the outside the saucer.
24. Sixteen buttons. Strangely, the buttons are represented, not by round dots, but by dashes. I suppose that the eye of the writer of the bill did not distinguish clearly their difference.
25. One axe. The axe is represented rather conventionally by a sign resembling the letter P.
26. Three combs. The comb is indicated by a rhomboidal figure, with dashes under the base representing the teeth.
27. Eleven pounds of sugar. A little figure, which is neither a square nor a ring, represents a sawed piece of sugar.
28. One frying-pan. The frying-pan is indicated by a ring and a dash, the latter representing the handle.

Copy of a Letter (Fig. 249).

1. Five sables. Why a sable is represented only by its hind-legs is not clear.
2. Twenty spring fawn-skins. The drawing represents a skin taken from a new-born fawn. The side-lines represent the head and the feet.
3. Five fox-skins. The middle line represents the skin, and the side-lines the four legs.
4. A hundred and fifty reindeer-fawn skins. The whole reindeer-skin is represented by a rectangular figure, and the skin from the legs by four dashes. The difference in the representation of the reindeer-skin and the fox-skin is due to the fact that the fox-skin is taken off entire, and is round; while the skin of the reindeer, before being taken off, is first cut, beginning at the lower lip, the entire length of the animal. The reindeer-skin is therefore shown opened.
5. Five bear-skins. The bear-skin is taken off in the same manner as the skin of a reindeer, and it is therefore shown opened out. The paws are not indicated, being imma-



Fig. 249. Koryak Account.

terial; but a more characteristic feature of that animal is indicated on the skin, namely, thick black hair.

6. Ten wolf-skins. The wolf-skin is taken off in the same manner as the reindeer-skin, and its representation differs from that of the reindeer only by the addition of a long tail.
7. Two wolverene-skins. The skin of the wolverene is taken off like that of the fox. Accidentally it is represented as smaller in size than the fox. Wolverenes in general are larger than foxes; but the characteristic feature of that animal — a large body and short legs — is brought out.
8. Three skins of polar foxes. The skin of the polar fox is represented in the same way as that of the other fox (No. 3).
9. Ten skins of polar foxes for thirty rubles. This memorandum, with a double meaning, — since it indicates both the number of skins and their cost, — is put by Qaci'lqut in parentheses (two lines). Of the number-signs, the former (ten) indicates the number of skins, and the latter (thirty) their value. The repetition of the fox-skin signifies that both numbers relate to the same article.
10. Three coats of reindeer-skin. The illustration of the coat differs from that of the reindeer-skin (No. 4) by having only two side-lines for sleeves, and also by indicating the hood of the coat in the upper part.
11. Five pairs of fur boots. Only one boot is shown.

List of Goods (Fig. 250).

1. A boy's summer and winter suit and travelling-overcoat (separately). The suits are drawn, like the coats, with the addition of boots (under the line). In Fig. 250 Qaci'lqut did not use the numeral sign in cases of single articles.
2. A man's winter and summer suit and overcoat. Drawn as in No. 1.
3. A girl's summer and winter combination-garment and two overcoats. In the drawing of the suit, the woman's wide trousers are indicated.
4. A woman's summer and winter suit and two overcoats. Made as in No. 3, only of a larger size. The lines between the first four numbers have no significance, and merely serve to separate one from the other.
5. One combination-dress of a child. The peculiarity about this dress is that it has a flap sewed on behind in the shape of a tail, which is placed between the legs.
6. Two collars for reindeer-harness.
7. Two reindeer bridles and reins. The drawing of the bridle differs from that of the collar in having inside the ring an indication of the hitching-strap; and on the side, of the bone piece.
- 8, 9. One reindeer-lasso, and a coil of seal-skin thong.
- 10-12. A pair of boots, two reindeer-skins, one whip.

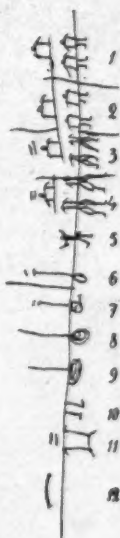


Fig. 250 Koryak Account.

After an examination of Qaci'lqut's writing, the interesting conclusion may be drawn that the conventional representation of animals and other objects of nature is not always a perversion of the original realistic representation. Conventionalism in this case constitutes the primary phase. The primary conventionalization of natural objects may be the result of inability

212 to give a realistic representation of objects, or, when the presentation is for
517 practical ends only, a lack of care in execution. In the present case, for instance, it was important only that the illustration should serve to recall the objects. With the exception of the illustrations of dress (Fig. 250), in which any one would recognize human figures, we could not tell the meaning of the other primitive illustrations in these writings without explanation. Even other Koryak to whom I showed the letter seldom recognized all of them. Not all Koryak traders who keep written memoranda are familiar with the number-signs used by Qač'ilqut. One of them, for instance, used only one sign, the line. He used only units, in the same manner as the Koryak and Chukchee make use of counters in verifying accounts.¹

211 I did not see among the Koryak notched sticks like those used by the Yakut, the Tungus, and the Yukaghir, in recording accounts. However, the trader mentioned employed some devices to avoid the necessity of writing an interminable row of lines in enumerating large numbers; for instance, to indicate a pud (40 Russian pounds, or 36 pounds Avoirdupois), he drew a balance with loaded scale in equilibrium. This signified full weight.

212 Nelson² speaks of the trading-records of the Alaskan Eskimo, which, judging by his account, are quite similar to those of the Koryak. Unfortunately he does not give any illustrations which would make it possible to compare the records of the Eskimo and the Koryak.

823 *Geographical Maps.* — Among the Koryak pencil-drawings, there are also geographical maps of the sea and the coast of Penshina Bay. The Koryak display in their charts quite a true perception of the relative disposition of the seacoast, rivers, mountains, and settlements. On the whole, their charts resemble very much the illustrations of Eskimo charts published by other travellers. The settlements are indicated on Koryak charts by rings, dots, or small dashes, which represent houses; small rivers are represented by one line, large ones by two parallel lines; mountains are represented by parallel shadings of different degrees. One chart made by a lad of seventeen in Kamenskoye, and representing the northern part of Penshina Bay, is especially well made (see Fig. 251). Itkana and Ma'meč Capes protrude into the bay, making it appear very narrow. As a matter of fact, this part of the bay is very narrow (see Part I. map). In calm weather the passage from the Itkana settlements to the Ma'meč can be made in a skin boat in from eight to ten hours. The mouth of the Penshina and Talovka Rivers, which empty into one inlet, the Kamenskoye and the Talovka settlements, the mountain-ridge between Talovka and Penshina, and a few other features, are also well drawn. The three Itkana villages are not indicated. In the bay are shown some hunting-scenes of floating ice-fields with seals on them, of spouting whales in pursuit of sea-mammals, and hunters in kayaks and skin boats.

¹ See p. 427.² See Nelson, p. 198.

The Koryaks

875

Before the Revolution, the Koryaks did not have any writing. They had some beginnings of pictographic writing, but it was used on a very limited scale. In 1932, the first Koryak primer was published, based on the Latin alphabet adopted at the time. Koryak literary language was established on the basis of the Chavchuvendialect. In 1937, a new Koryak alphabet was developed on the basis of Russian letters.

Textbooks for elementary schools are published in Koryak, as are political and literary works. The books published in Koryak include the works of Koryak writers. In addition to the okrug newspaper, Koryakskiy Kommunist, many rayon papers are published in the Koryak National Okrug.

Cultural work among the Koryaks is conducted by the village clubs, reading huts, libraries and houses of culture. The specific conditions of Koryak life have demanded special forms of cultural activity (especially in connection with the herders' brigades). This has been accomplished by the mobile Red Yarangas.

Wide political and cultural-educational work is being conducted among the Koryak women. Special departments have been set up at the Rayon Committees of the Communist Party to direct this work, and every collective farm has its own women's soviet. With the aid of the active leadership, the women's soviets organize classes for the semiliterate, read newspapers, draw women into active social life. The sanitary and other committees of the women's soviets help working Koryak women to keep the dwellings clean and hygienic, organize various circles (sanitary circles, cutting and sewing circles, etc.), advise women on various questions of culture and daily life, and help in the rearing of children.

During the years of socialist construction, a wide network of various medical institutions has developed on the territory of the okrug. In 1952 there were 5 hospitals and 14 health centers in the Karaginskii Rayon alone.

Religious ideas and the rituals connected with them are receding into the past. Dances and games have lost all their ceremonial significance, and are now merely gay diversions and sports. The traditional reindeer and dog races are now the closing feature of all Soviet holidays.

The Party organization of the okrug includes in its ranks many Koryaks. Among them are propagandists, newspaper editors, and workers of the Rayon Committees of the CPSU.

Many Koryaks have acquired technical and other skills formerly unknown among them, and have become motormen, radio operators, accountants, bookkeepers, zootechnicians, and workers in public health and education.

Most of the deputies of local soviets, people's judges and assessors are members of the local nationalities. The Koryaks have their elected representatives in the Kamchatskaya Oblast Soviet of Workers' Deputies and in the supreme government organ—the Supreme Soviet of the USSR.

